

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

48/93

NONCONFORMANCE REPORT

Project No. 20-01402-571

NCR No. 2001-08

PART 1: DESCRIPTION OF NONCONFORMANCE

Thermometer H98-170 Model # 15-166A (Asset number 007166) was found to be out of tolerance during a normally scheduled calibration.

Initiated by: Darrell S. Dunn

Date: 5/8/2001

PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION

Disposition:

Accept data obtained in tests using this thermometer as is.

Basis of Disposition:

The thermometer had an error greater than 1.0 degrees at 150 °C. However, the thermometer was within calibration for the temperature range from 0 to 100 °C. Tests conducted with the thermometer were conducted in the range of 20 to 95 °C. Over this temperature range, the instrument error was, at most, 1.0 degrees. A 1.0 degree error in temperature is acceptable and in general an error in test temperatures of less than 2 °C will not adversely affect the parameters measured during testing.

Action to Correct Nonconformance:

Bubbles in the Mercury column were removed by SwRI calibration lab staff and the thermometers were recalibrated. A copy of the out of tolerance report was placed in the calibration records file. All laboratory staff will be instructed not to store or position thermometers horizontally. All thermometers should be positioned and stored vertically with the mercury bulb facing down.

Darrell S. Dunn

Target date for completion: 5/14/2001

Proposed by: Darrell S. Dunn

Date: 5/8/2001

PART 3: APPROVAL

Element Manager: *Jim S. S. S.* Date: 5/8/01

Director of QA *Dunn* Date: 5/8/2001

Comments/Instructions:

Review of Thermometer Storage required.

PART 4: CLOSE OUT

Comments: On 5/15/2001 a review was performed on the storage of laboratory thermometers. The review found the thermometers to be stored in the vertical position with the mercury bulb facing down as described in the action to correct the nonconformance.

Verified by: *No further action required* Date: *5/15/2001*

Mark R. Ehrlstrom

Distribution:

*QA Records
D. Dunn
Element Managers
B. Sogge, H. Garcia
M. Ehrlstrom/30*

To: Darrel Dunn, Div 20, Bldg 57

From: Walt Hill, Institute Calibration Laboratory Supervisor

CC: Rodney Weber, Institute Quality Assurance Manager

Date: May. 1, 01

Subject: Out-of-tolerance Notice

The purpose of this notice is to alert you of a condition which could have caused erroneous measurements. The as-found readings are provided for your evaluation to determine if the instrument had any impact on your operations and if further action is required. If we can be of assistance, please contact the Calibration Laboratory at 522-5215.

Manufacturer: Fischer Scientific **Model:** 15-166A

Description: Thermometer **Serial Number:** H98-176

Asset Number: 7166 **User ID Number:**

Last Calibration: 4/18/00

Date Received for Service: Apr. 26, 01 **Work Order Number:** 144013349

Service Requested: Calibrate before use

Remarks: Thermometer has partial separation of mercury. As Found taken in this condition.

OUT OF TOLERANCE AS FOUND DATA				
PARAMETER OR FUNCTION	APPLIED OR NOMINAL VALUE	INSTRUMENT READING	INSTRUMENT ERROR	INSTRUMENT TOLERANCE
Temperature	-19.889 Deg C	-20.7 Deg C	0.81 Deg C	+/- 1 Deg C
	0.000 Deg C	-0.9 Deg C	0.9 Deg C	+/- 1 Deg C
	25.000 Deg C	19.0 Deg C	1.0 Deg C	+/- 1 Deg C
	100.000 Deg C	99.0 Deg C	0.9 Deg C	+/- 1 Deg C
	149.966 Deg C	148.1 Deg C	1.86 Deg C	+/- 1 Deg C